MACCommentsfromDanIhara061407.doc

To: CalEPA Market Advisory Committee (MAC)
From: Daniel M. Ihara, Ph.D. economist
Re: Specific Questions and suggestions -- MAC Draft Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California

I respectfully submit the following specific questions and suggestions for the Final text of the MAC Recommendations Report (and the same attached to this email)::

Question: Had the MAC considered having an Executive Summary for Policy Makers as is used in the PPCC reports? Such a summary could be useful to legislators or their staffers when they consider this issue in the future. Perhaps Chapter 8: Conclusions was thought to serve this function.

Observation: There are Five major Recommendations areas (which correspond to the 5 Recommendation Issues listed in the CalEPA June 1 Press Release announcement of the issuing of the report), namely recommendations regarding:

1. Program Scope:
2. "First seller " approach
3. Allocation method
4. Offsets
5. Linkages w/ other jurisdictions

I have the following questions and suggestions regarding these 5 areas:

1. Program Scope:

From public comments made during Tuesday's (June 12th) web cast it seemed evident there was some confusion regarding the relation of the cap and the issuance allowances.

p. 21 4.2: I suggest the following substution ***[in brackets]*** in the first sentence in 4.1.2 p. 21:

> The Committee recommends a gradual approach to achieving the 2020 target: that is, starting with ***[issuing allowances at an annual level]*** that declines over time to 1990 levels] (taking into account expected reductions from sources outside the cap) by the year 2020

6.4.1 p 63: On page 63, at the end of the second full paragraph ending with"…goals of flexibility and environmental integrity, I suggest that the following two sentences be added:

> ***[After a compliance period ends, it might be desirable, for a variety of reasons, to adjust the number of allowances to be given in the next compliance period. For example, if emissions in the completed compliance period were higher than needed to reach the 2020 target, or, if the traded emission allowance prices were too low to stimulate the needed***

investment to reach the 2020 target, fewer allowances might be issued than were planned in subsequent compliance periods.]

If the MAC concurs, these two sentences could be elevated to a recommendation.

2. "First seller" approach:

5/2/5 p. 49: At the end of the paragraph that begins "Recommend… and ends with… a …precise monitoring and accounting," I suggest the following sentence be added: ***[As noted earlier (4.1.1 p. 22) "Mandatory reporting should be instituted as soon as possible", even while the approach to be used is being decided upon, so as to keep the "first seller" approach open as a feasible possible option].*** (note: if such mandatory reporting is not required, it could put the first seller approach at a disadvantage later, because any reporting difficulties would be discovered at a later date).

3. Allocation Method:

As was pointed out in Tuesday's meeting, auctions would raise funds in significant amounts. The Air Resources Board or the legislature may not be best suited to " promote investment in low GHG technologies and fuels with these funds" and to "offset the economic impact of programs."

6.1.2 p. 53: I suggest the following be added to Section 6.1.2 after the sentence ending,"…provided for a temporary period of transition"

[A Global Warming Solutions Revenue Board might be constituted to specifically act within the above described guidelines.]

If the MAC concurs, this sentence could be the basis of a recommendation.

After the sentence that ends the second full paragraph in this subsection, I suggest the following footnote: " …displace income taxes or other taxes that distort economic decisions" Footnote)

Footnote: In economic terms a cap-and-trade program "internalizes a negative externality," namely, GHG emissions. In so far as this raises carbon-emission-related prices, it changes relative prices thereby affecting consumers' choices. It is well established in standard economic theory, that a price rise has both a substitution effect (from the change in relative prices) and an income effect, because real income has been reduced by the price increase. The income effect can be counter-balanced by returning income to the consumer sufficient to make them as well-off as they were originally, but with choices that involves less of the good whose relative price increased.

4. Offsets

There are some reasons why early action, in part, might be justifiably be treated like an offset. It is true that for a private entity that "If allowances are auctioned, early action may provide its own rewards: (6.2.2 p. 57). This would especially be the case for offsets initiated immediately prior to

the start of a cap-and-trade program, because affected entities would have, in a sense, a reprieve on compliance until the cap-and-trade program begins. But early actions taken prior, say to Dec. 31, 2006 could be credited. Because early action also provide *social* benefits in the following way: The "half life" of CO2 in the atmosphere has been is long and has been estimated to be around 100 years. This can be visualized as a line, or profile starting at 1 and declining to approximately to one half after approximately 100 years. The radiative forcing of CO2 could be considered as directly proposition to this graph of "CO2 ton years". In one view a ton of CO2 emitted at one time, is equivalent to that emitted at another time. However, when one considers that GHG emissions including CO2 are rising and, it is hoped. that they will peak and then decline eventually to a level that stabilizes atmosphere GHG concentration, one ton emitted early than another differs in impact from one emitted later.

Suppose, one ton is reduced t years before year 0. Compared to one ton reduced in year 0, other things equal, the peak in emissions would occur t years carbon years earlier. If t equaled 5, the peak is affected by a reduction of 5 CO2 years, the net benefit declines, however, starting with year 0, and declines to about 2.5 after 100 years. The credit that could be given for this early action would be between 2;5/75 = 0.033 CO2 years (75 years is approximately the area of the one ton profile through its first 100 years) and 5/7.5 = 0.067 C02 years. Consequently on ton reduced 5 years before the say December 31, 2006, so as not to give credit for post December 31' 2006 reductions. , could be credited like an offset as between 0.033% and 0.067% of one allowance. Such an allowance could be credited for use after January 1, 2012. Such a future allowance is credited before 2012, could be traded (either directly or through an options contract) that is sold prior to 2012. The price of that sale could be taken as a measure of how much the market currently values a future allowance. Actual emission reductions that are reported on and consistent with the California GHG Registry could be considered for being awarded such allowance credit, but not offsets such as carbon sequestered in forests, unless offset standards were adopted and met as part of the cap-and-trade program. If the allowances issued after the program begins in 2012 were reduced by the total of "early action" allowances issued, the "early action" allowances would be additional.

The addition supported by the above would be:

6.2.2 p. 57: Insert in the paragraph beginning "While auctioning allowances yields…" in the following sentence add the word "partial" and the additions to the last sentence in the paragrapgh, so that the passage reads:

":The Committee considered two possibilities (a) granting the firms ***[partial]*** offset" allowances….. ***[The committee prefers the second option, though some justifications could be made for very partial offset allowance credit in ways that satisfactorily address additionality concerns*** }(with the above rationale is given as a footnote).

5. Linkage with other Programs

6.5.2 p., 65: add to end the only paragraph in this sub-section the following:
"…should expand making the market more efficient**"**

[· Reduces the pressures for leakage into the geographic areas covered by these programs, for example linkage to other Western States would reduce pressures for electricity production leakage to a non-carbon emission capped state.]

Some additional questions and suggestions:

-- Implementation Issues: in the subsection on p. 35 titled Is inclusion of the Transport Sector Warranted…:

Although it is basically true that the share of a $10 increment in the per ton CO2 price is 8.8 cents, , the impression created that a cap and trade system has *only* minimal impact on prices is somewhat misleading.

This can be corrected by the substituting, for "for every", the the following bracketed phrase:

[By itself alone, a] $10 increment in the per ton-CO2 equivalent price of allowances, the effect on the gas price would be 8.8 cents per gallons;

(note: this avoids the interpretation that the first $10 from instituting a cap-and-trade program only would raise gas prices 8.8 cents. Any change in gas price would depends on the magnitude of improvements in fuel efficiency and the price elasticity of demand for gasoline consistent with allocating the reduced amount of carbon dioxide -emitting fuels

-- 1.3 p. 5:
At the end of the first full paragraph adding the following bracketed sentence:

"…And the Northeast Regional Greenhouse Gas Initiative. It beyond the scope and time available to the Market Advisory Committee to address economic impacts of possible cap-and-trade program on the California economy: that, and other matters, as noted previously, fall under CARB's wider responsibilities under AB32.

-- Further involvement of Committee members after submittal of Final Report

The Committee is not positioned to make a recommendation for it, itself, having any future role, however this is a personal request from a member of the public that: ***any draft scoping plan sections dealing with cap-and-trade programs be made available to all the former members of the Committee members and comments be synthesized by the Chair and co-chair noting any changes in the availability to comment of former committee members***.

--- p. 1 Question: Was there a specific policy or measure prior to 1967, that was being thought of in the sentence "For *more than* four decades California's policies to encourage renewable energy generation and improve energy efficiency…[emphasis added]" If not, then perhaps ***"For four decades"*** would suffice, deleting "more than" from the phrase "more than four decades.".

-- List of acronyms used:

In addition to a glossary a *list of all acronyms used* would be helpful, including, for example SIP on page 17, LSE (Load Serving Entities) and all other acronyms used.

-- Some works cited were not include in "Works Cited"

Some works cited, were not included in Works Cited.e.g. (Varian, 2000) p. 32, works cited on page 55 footnote 44, 45 & 46 (Hold *et al* (2007), (Binmore and Klemperer 202) and (Wruck 2004).

-- Table 4-1 p. 31: Clarify that in the column marked "tons, that tons are tons in the 1990 emission level, not year 2004 tons. The 1990 tons, though, are based on the *percentage* share of emissions in 2004, not the 2004.tons themselves.

-- pp 19 – 20. There could be a clarification that *Residential and Commercial emissions* are largely related to natural gas (for heating and to a lesser extent cooking) so as to avoid giving a basis for wondering if electricity emissions might be double-counted.

The preceding is offered in the hope that it may be useful in preparing the Final Report.

The committee is to be highly commended and thanked for producing such a path breaking and valuable a document -- an extremely useful tool for addressing the many different challenges posed by Global Warming.

Respectfully submitted,

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